



**National  
Transportation  
Safety Board**

# Human Performance

Kenny Bragg

# Overview

- Driver performance
- Driver fatigue and drug use
- Drug testing for CMV drivers

# Exclusions

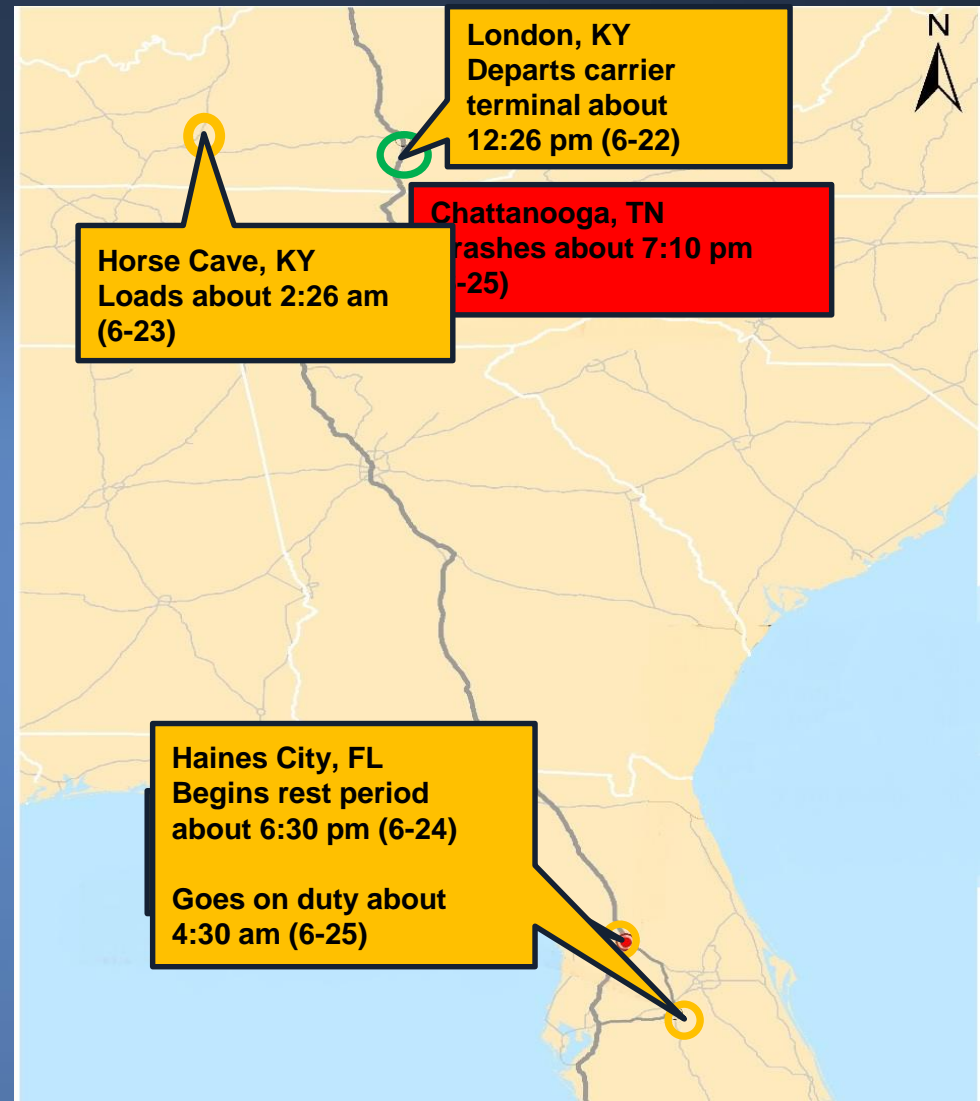
- Alcohol use
- Licensing/experience issues
- Distraction
- Medical conditions
- Weather

# Driver Performance

- Excessive speed
- Clear visibility of roadway for a mile
- Visual cues in place to warn drivers
- No evasive steering
- No emergency brake application

# Driver Fatigue

- 40 hours of wakefulness
- 10 hours of sleep opportunity
- 14.5 hours awake and driving



# Indications of Drug Use

- Drug recognition expert evaluation
- Postcrash toxicology positive for methamphetamine/amphetamine

# Drug Use History

- July 2013: positive for oxymorphone (urine)
- May 2015: positive for methamphetamine (hair)
- June 2015: positive for methamphetamine (blood)

# Pre-employment Drug Testing

- Intended to deter illegal drug use
- 2008 GAO report identified deficiencies:
  - Urine tests offer short window of detection
  - Lack of compliance in sample collection
- Hair testing more suitable for pre-employment drug testing



# Hair Drug Testing

- Detection window from days to months
- Offers a stronger deterrent effect
- FAST Act requires that DOT allow hair testing
- Would likely have identified driver's drug use

# Commercial Driver Drug Use

- October 2014 Davis, Oklahoma, investigation identified driver use of synthetic cannabinoids
- Propose reiteration/reclassification of H-15-38
  - Determine prevalence of drug use

# Summary

- Driver's performance affected by fatigue and drugs
- Driver's drug use history not identified
- Hair drug tests would likely have identified drug use
- Extent of drug use among commercial drivers must be determined to develop countermeasures



# National Transportation Safety Board